



Sustainable agrotourism promoting local development: Case study in Rancho Escondido, El Empalme Canton

Agroturismo sostenible impulsando el desarrollo local: Caso de estudio en Rancho Escondido, Cantón El Empalme

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ABSTRACT

The purpose of this case study was to analyze the implementation of agrotourism in the "Rancho Escondido" farm located in the Canton of El Empalme, Ecuador, and its potential to promote local development. The article seeks to demonstrate how agrotourism can generate economic benefits for the community, promoting environmental sustainability, improving the quality of life of the inhabitants, through the evaluation of the perception and participation of the inhabitants. The results of the survey applied to the inhabitants of the Canton of El Empalme revealed that 73.23% of the respondents have already participated in agrotourism activities, which shows a significant interest in this type of initiative, in addition, 54.97% of the respondents expressed their willingness to visit the Rancho Escondido farm if it were implemented in a sustainable agrotourism program. Among the activities, the interest in the walk-in vote stood out with 21.47%. This proposal is aligned with the sustainable development goals, which seek to promote tourism as economic development. By offering a replicable model, the study will not only benefit the owners of the "Rancho Escondido" farm but can also be applied to other farms.

Keywords: community participation; environmental conservation; rural development; sustainable agritourism; tourism preferences

RESUMEN

El presente caso de estudio tuvo como propósito analizar la implementación del agroturismo en la Finca "Rancho Escondido" ubicado en el Cantón El Empalme, Ecuador, y su potencial para impulsar el desarrollo local. El artículo busca demostrar como el agroturismo puede generar beneficios económicos para la comunidad, fomentando la sostenibilidad ambiental, mejorando la calidad de vida de los habitantes, a través de la evaluación de la percepción y participación de los habitantes. Los resultados de la encuesta aplicada a los habitantes del Cantón El Empalme reveló que un 73,23% de los encuestados ya han participado en actividades de agroturismo, lo que evidencia un interés significativo en este tipo de iniciativas punto además un 54,97% de los encuestados expresó que su disposición a visitar la Finca Rancho Escondido si se implementara en un programa de agroturismo sostenible. Entre las actividades se destacó el interés por el paseo en bote con un 21,47%. Esta propuesta se alinea con los objetivos de desarrollo sostenible, que busca impulsar el turismo como desarrollo económico. Al ofrecer un modelo replicable el estudio no solo beneficiará a los propietarios de la Finca "Rancho Escondido" sino que también podrá ser aplicado en otras Fincas.

Palabras clave: participación comunitaria; conservación ambiental; desarrollo rural; agroturismo sostenible; preferencias turísticas



1. INTRODUCTION

Sustainable development involves balancing economic growth, social equity, and environmental protection to meet present needs while safeguarding those of future generations (Borja, 2018). Tourism has established itself as a model for economic development and a major driver of transformation, generating foreign exchange earnings and employment opportunities through the strong multiplier effect of tourism demand. Consequently, tourism is considered, in the words of Michelle Bachelet, “an industry of the future that does not fear change,” while also enabling the participation of other strategic sectors (Beltrán Beltrán, 2023).

Ecuador is a megadiverse country whose productive structure remains heavily dependent on the primary sector. In this context, the 2030 Agenda has promoted sustainable tourism initiatives through Goals 8 and 12, encouraging sustainable and inclusive economic growth and highlighting the importance of developing and adopting sustainable tourism practices that minimize environmental and sociocultural impacts. This makes tourism a key strategy for transforming the country’s productive structure into a more sustainable and inclusive model (ONU, 2019).

Agritourism, as an essential form of rural tourism, promotes economic and social development and environmental preservation (Bravo & Zambrano, 2018). Various studies indicate that agritourism is primarily implemented on competitive agricultural estates, farms, or agricultural facilities, where visitors are motivated to participate in farming activities and create memorable experiences through recreation or learning about aspects such as local culture (Puruncaja, 2016).

El Empalme Canton has a wide variety of traditional agricultural settings that provide favorable conditions for implementing agritourism (Garaicoa Fuentes et al., 2023). In particular, the case of Rancho Escondido Farm illustrates how a model for promoting local development through agritourism can generate economic benefits while encouraging environmental education and respect for ecosystems (Álvarez Calupiña et al., 2022). This involves promoting recreational and sustainable practices that engage visitors in agricultural activities and establish a direct connection with the surrounding environment (Linares & Morales, 2014).

This research focuses on Rancho Escondido Farm, a site distinguished by its diverse flora and fauna and scenic beauty. Its main economic activities are crop and livestock production, primarily involving the cultivation of cacao, bananas, maize, rice, and fruit, as well as the rearing of cattle, pigs, and other wild animals. This diversity of natural resources can support the implementation of new projects that strengthen tourism development in the San Antonio community. The farm also provides ideal settings for a range of tourism, agritourism, and ecotourism activities.

2. MATERIALS AND METHODS

2.1. Location

Rancho Escondido Farm is a 14-hectare property that aims to become an agritourism destination. It is located in the San Antonio community, at kilometer 3.5 of the Buena Fe–Daule Peripa Reservoir road in Guayas Province, Ecuador. Its geographical coordinates are 0.842518° south latitude and -79.556939° longitude, at an elevation of 87 m above sea level. The site has a dry tropical climate, with average temperatures ranging from 24 to 33 °C.

2.2. Methodological approach

This research adopted a mixed-methods approach, combining qualitative and quantitative methods. The study was descriptive and explanatory and employed the case study method. A structured survey was administered to a sample of 382 participants, including potential visitors and local residents of El Empalme Canton.

2.3. Visitor profile

According to data from the National Institute of Statistics and Censuses (INEC), the population of El Empalme Canton in 2024 totals 87,331 people. Economically active individuals account for 65% of the national population; applying this proportion to El Empalme Canton yields approximately 56,765 people. This figure was used to estimate the population of potential tourists. The identified visitors were Ecuadorian nationals aged 21–30, predominantly male, whose main travel motivation was vacationing and who primarily sought activities related to relaxation, leisure, and recreation.

2.4. Population

The study considered the population residing in El Empalme Canton, which, according to INEC data, comprises 87,331 people. Approximately 65% of this population is economically active, equivalent to approximately 56,765 people.

The sample size was calculated using the Canavos formula, considering a total population of 56,765 individuals (Figure 1), a probability of success (p) of 0.50, a probability of failure (q) of 0.50, a margin of error (e) of 5%, and a 95% confidence level ($z = 1.96$).

N	=	Population	=	56,765	=	56,765
P	=	Probability of Success	=	50%	=	0.50
Q	=	Probability of Failure	=	50%	=	0.50
Nz	=	Confidence Level	=	95%	=	95%
Z	=	Confidence Coefficient	=	1.96	=	1.96
E	=	Margin of Error	=	5%	=	0.05
n = Sample			=	382		

Figure 1. Sample size calculation

2.5. Survey

The survey was administered to 382 members of the local community through Google Forms. This method facilitated residents' participation by allowing them to respond quickly and easily using their mobile devices. Google Forms enabled data collection for subsequent analysis using SPSS statistical software.

2.6. Survey analysis

Survey data were analyzed using SPSS, with bar charts used to visualize the results. This type of chart provides a versatile means of presenting findings, allowing the different categories to be clearly identified and understood.

3. RESULTS

The research was organized into two parts. The first aimed to assess the current situation of Rancho Escondido Farm through an initial interview with the owner. Subsequently, a set of questions was developed to explore perceptions regarding potential future demand for agritourism activities.

As shown in Table 1, Rancho Escondido Farm, owned by the family of Mr. Harold Joffre Macías León, is primarily dedicated to crop and livestock production. Growing demand for nature-based tourism experiences has prompted an initiative to diversify traditional activities through the development of an

agritourism model. The farm has natural resources that appeal to tourists seeking a safe, nearby setting where they can connect with nature. This trend has become particularly relevant in the wake of the COVID-19 pandemic and amid the country's current insecurity, as visitors prefer destinations where they can enjoy outdoor recreational activities with family and friends in a rural environment that offers tranquility and safety.

Table 1. Assessment of the establishment

Sector	Rcto. San Antonio - Guayas – El Empalme
Occupation	Farmer
Activities carried out	Cattle farming, pig farming, poultry farming, agriculture, plantations, cacao, plantains, maize, cassava, tropical fruits, and others.
Type of enterprise	Family-owned
Proposed tourism activities	Observation of wild flora and fauna, cow milking, hands-on agritourism, equestrian activities, and others.

The survey conducted among residents of El Empalme Canton showed that 43.98% of respondents were aged 21–30, 29.84% were aged 31–40, 23.56% were aged 15–20, and 2.36% were aged 41–50 (Figure 2).

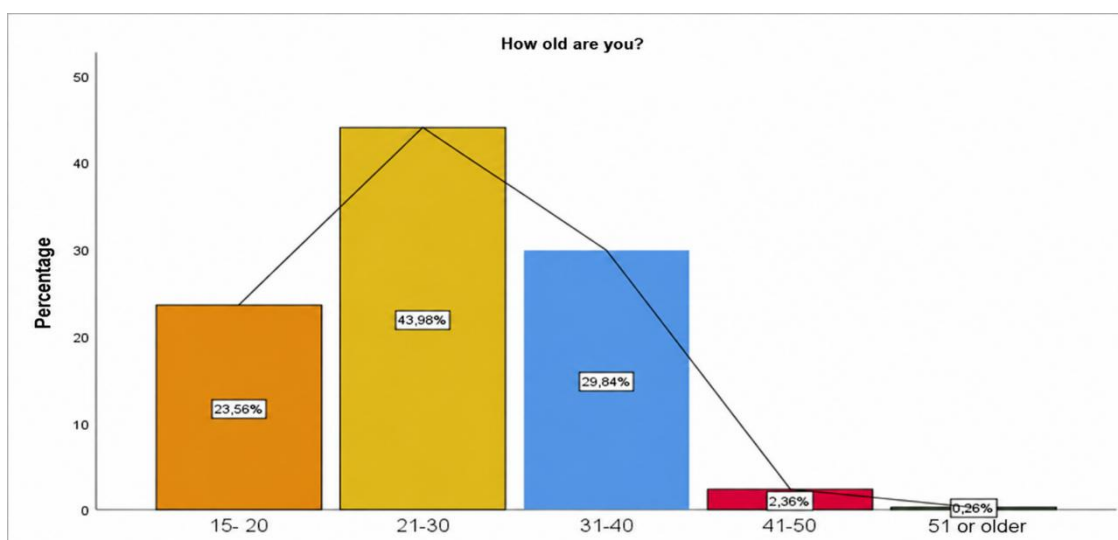


Figure 2. Age distribution of survey respondents

Of the total sample, 50.79% were male, while the remaining 49.21% were female (Figure 3).

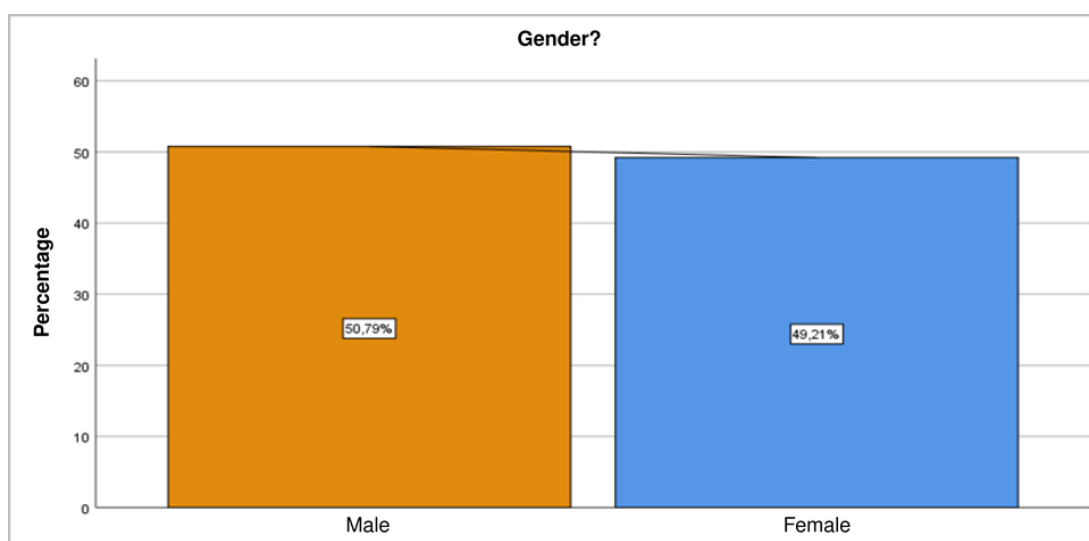


Figure 3. Gender distribution of survey respondents

The survey conducted among the sampled residents of El Empalme Canton showed that 50.79% of respondents were single, 36.13% were married, 4.71% were divorced, and 8.38% were in a consensual union. No respondents reported being widowed (Figure 4).

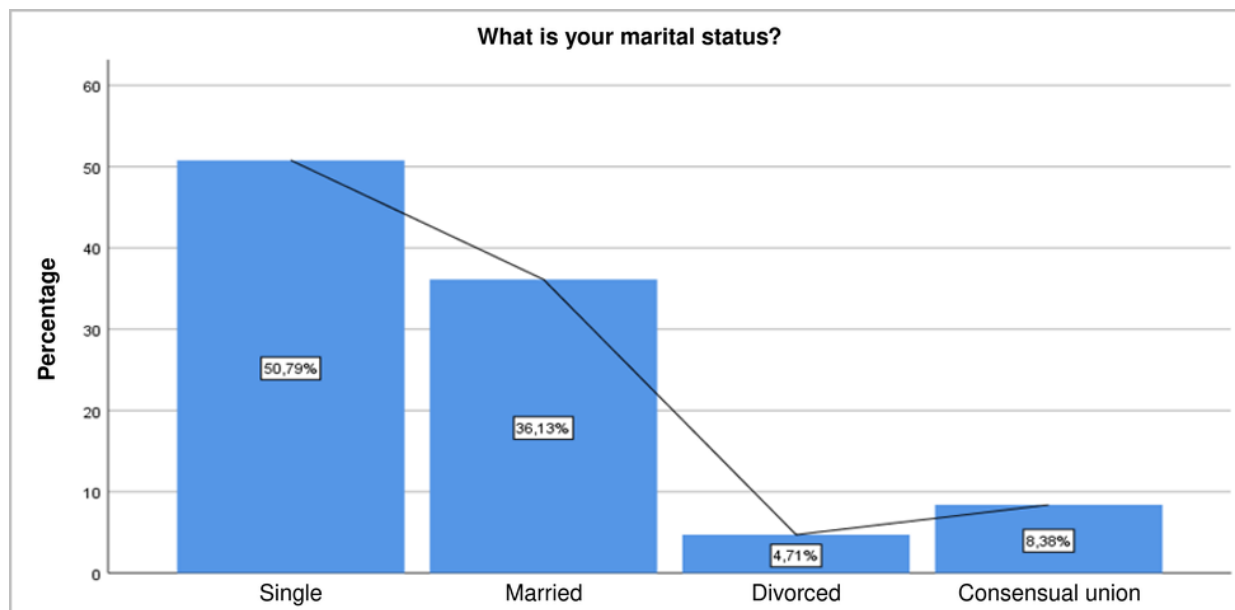


Figure 4. Marital status of survey respondents

Of the 382 people surveyed in El Empalme Canton, 52.88% had a secondary education, 33.77% had pursued higher education, 10.73% had a primary education, and the remaining 2.62% had technical training (Figure 5).

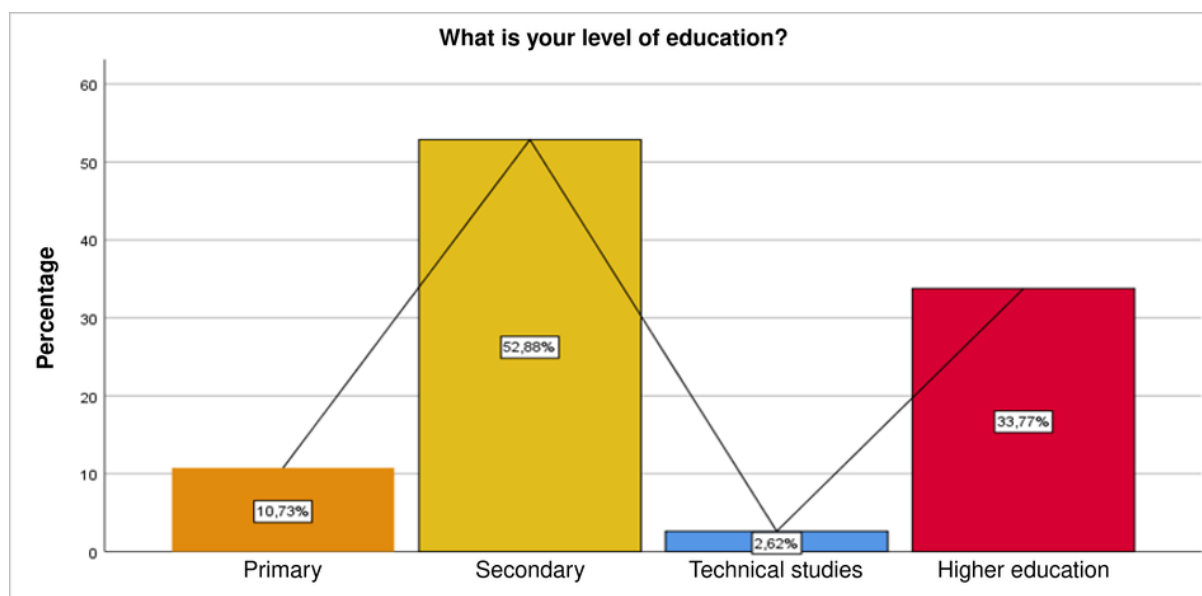


Figure 5. Educational attainment of survey respondents

Regarding employment status or occupation, 19.37% of respondents were self-employed, 24.08% were private-sector employees, and 22.77% were students. Public-sector employees also accounted for a considerable proportion, at 21.47%, while 12.30% were unemployed (Figure 6).

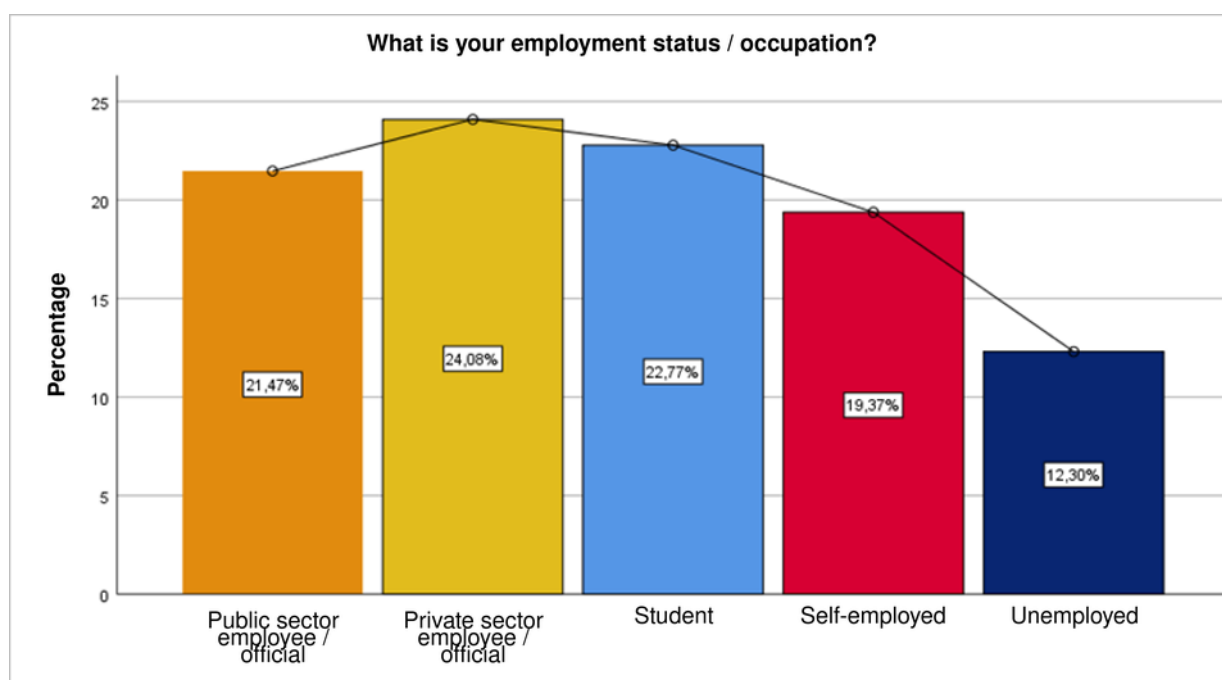


Figure 6. Employment status of survey respondents

Of the total population surveyed, 27.75% reported a monthly income exceeding \$600, 23.82% earned between \$401 and \$500, 19.63% reported earnings between \$501 and \$600, and 18.32% earned between \$201 and \$400. A smaller group, accounting for 10.47% and consisting primarily of students, reported a monthly income below \$200 (Figure 7).

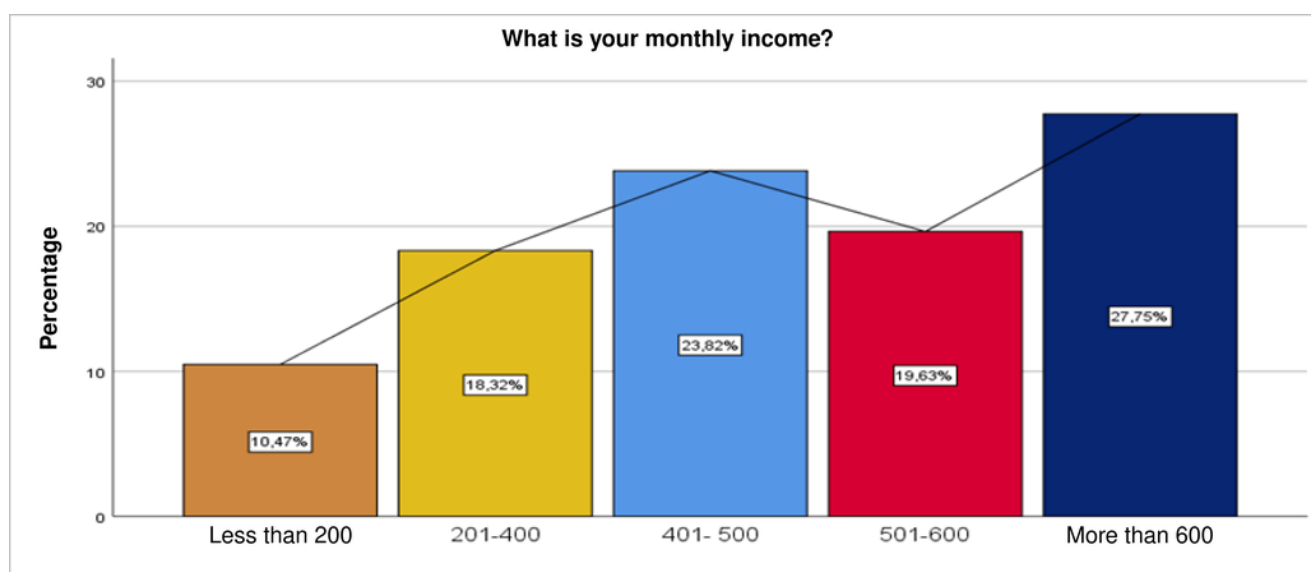


Figure 7. Monthly income of survey respondents

Regarding travel frequency, 31.94% of respondents reported traveling at least once a year, while 33.25% traveled two to three times a year. A further 18.85% traveled more frequently, and 15.97% reported rarely traveling during the year (Figure 8).

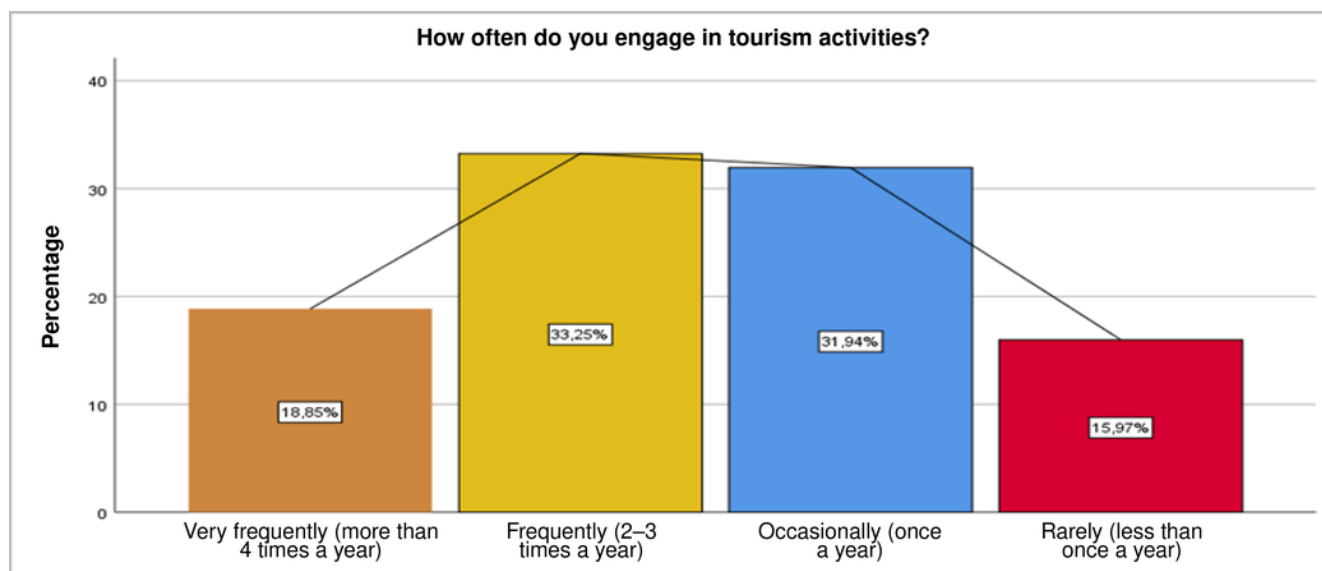


Figure 8. Travel frequency of survey respondents

People travel for various reasons that influence their choice of destination or tourist site. The survey identified these motivations among the sampled population: 32.20% traveled for vacations, 26.18% for leisure or recreation, 24.87% to visit family, 9.16% for public holidays, and 5.24% for work. Travel for study purposes accounted for 2.36% (Figure 9).

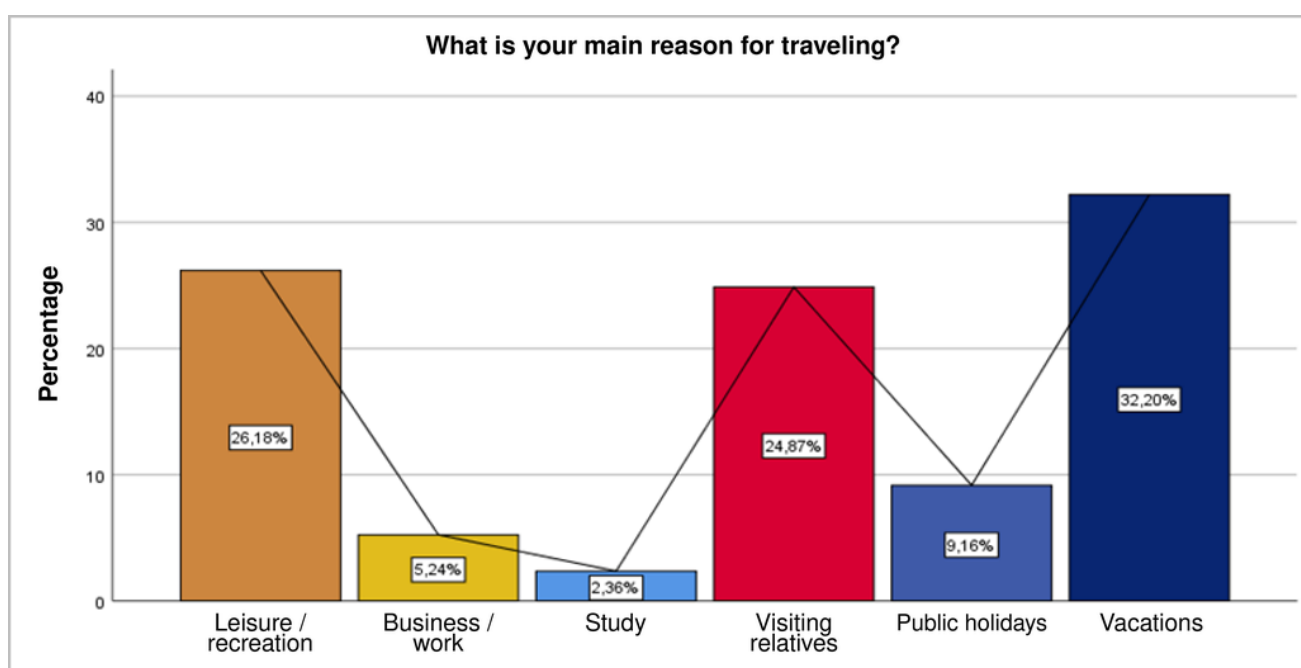


Figure 9. Respondents' travel motivations

The survey also identified respondents' usual travel companions. Overall, 56.81% traveled with their families, 16.49% with their partners, and 13.61% preferred traveling with friends, while the remaining 13.09% preferred traveling alone (Figure 10).

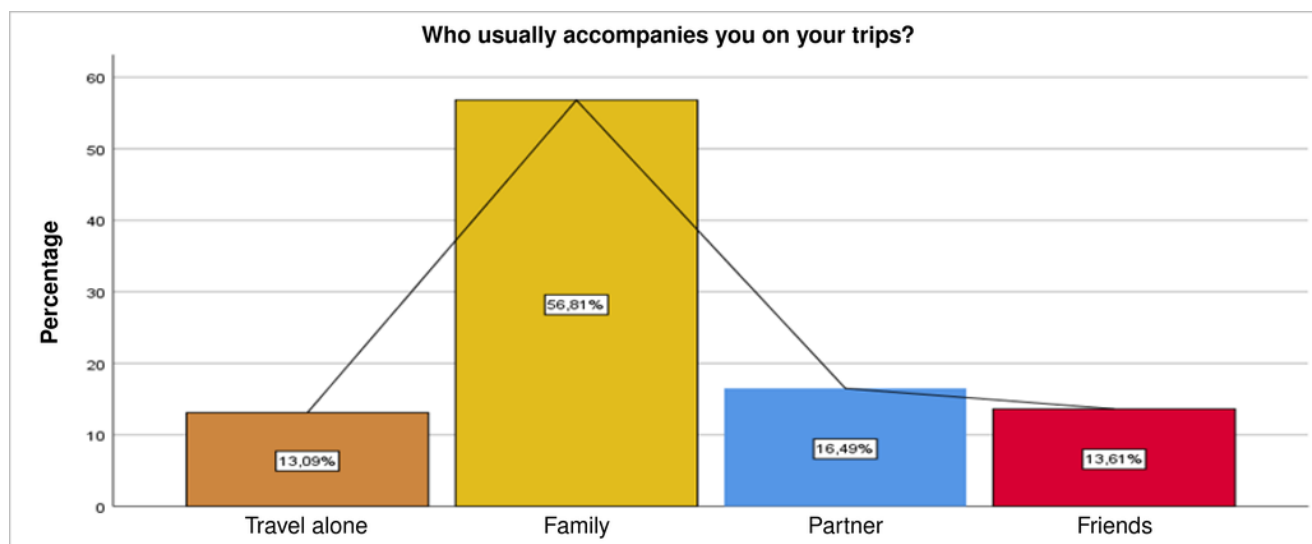


Figure 10. Respondents' usual travel companions

Regarding participation in agritourism, 73.23% of respondents indicated that they had previously participated in such activities, while 26.77% reported having no previous agritourism experience (Figure 11).

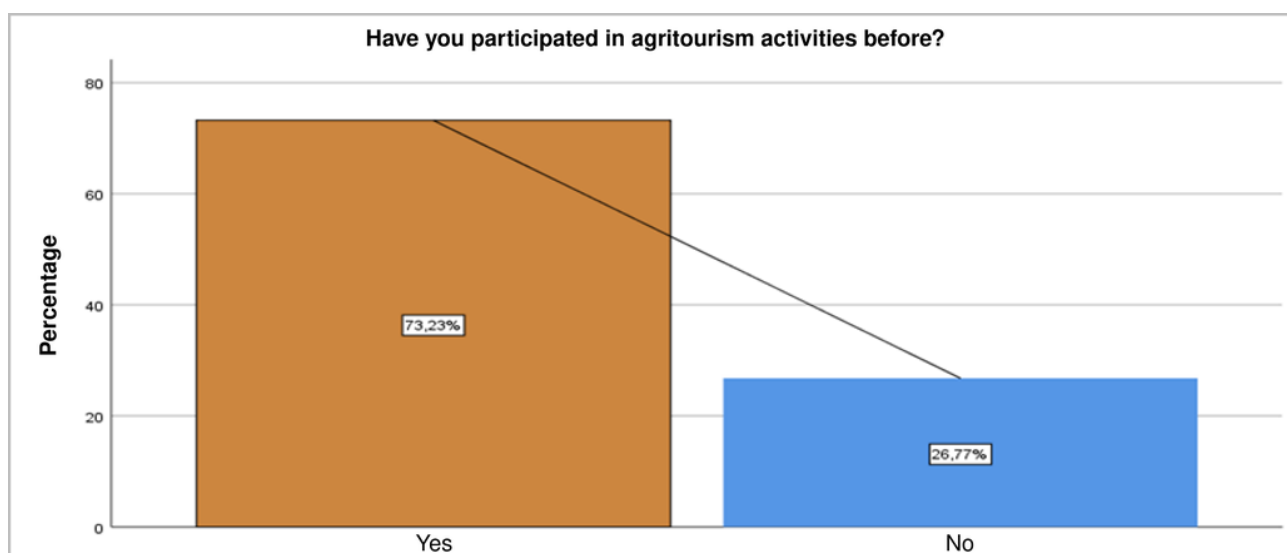


Figure 11. Respondents' previous participation in agritourism activities

The survey results concerning Rancho Escondido showed that boat rides generated the greatest interest among respondents, at 21.47%. Conversely, local cuisine attracted the least interest, accounting for 3.93% of participants (Figure 12).

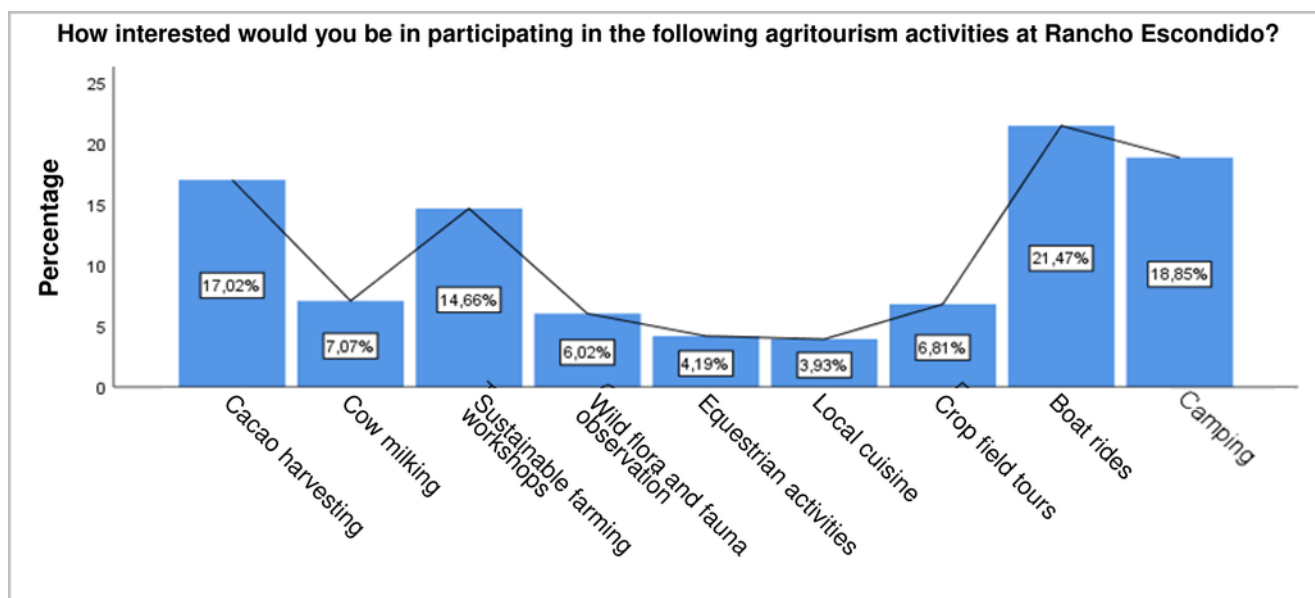


Figure 12. Interest in participating in agritourism activities

The survey results showed that the services most desired by potential visitors to Rancho Escondido Farm were accommodation, at 20.42%, followed by parking facilities, at 16.75%. In contrast, the least requested services were a camping area, at 6.81%, and security, selected by only 6.54% of respondents (Figure 13).

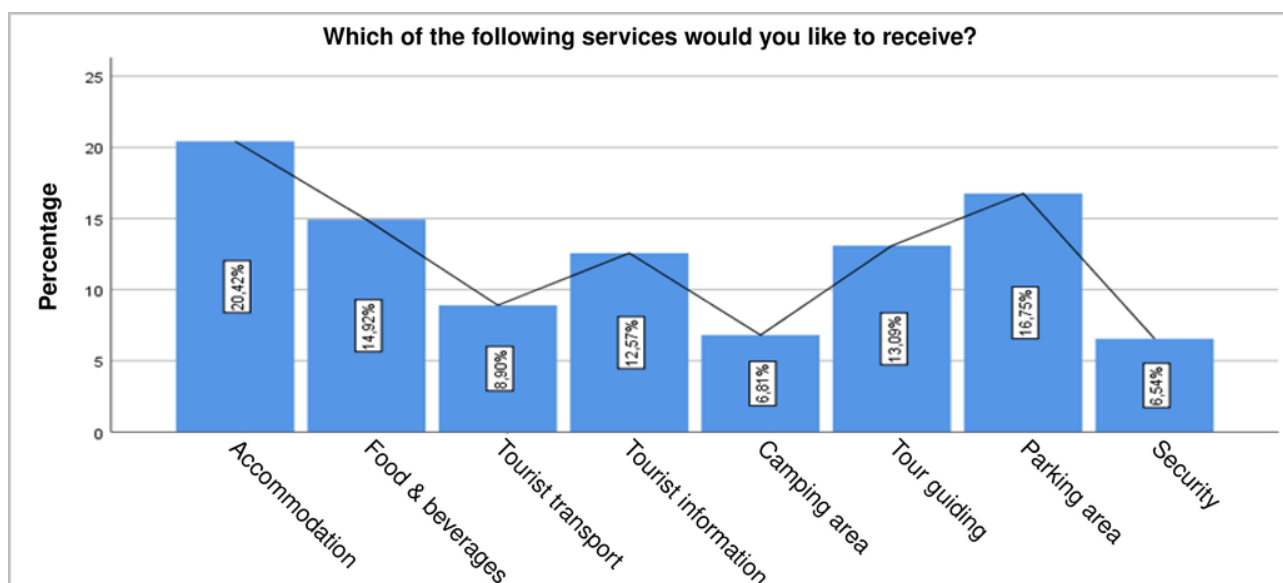


Figure 13. Services to be offered at Rancho Escondido

The facilities most desired by potential visitors to Rancho Escondido were a lookout point, at 20.94%, followed by cabins, at 19.63%. The least requested infrastructure included basic services, at 9.42%, and tourist signage, selected by 10.21% of respondents (Figure 14).

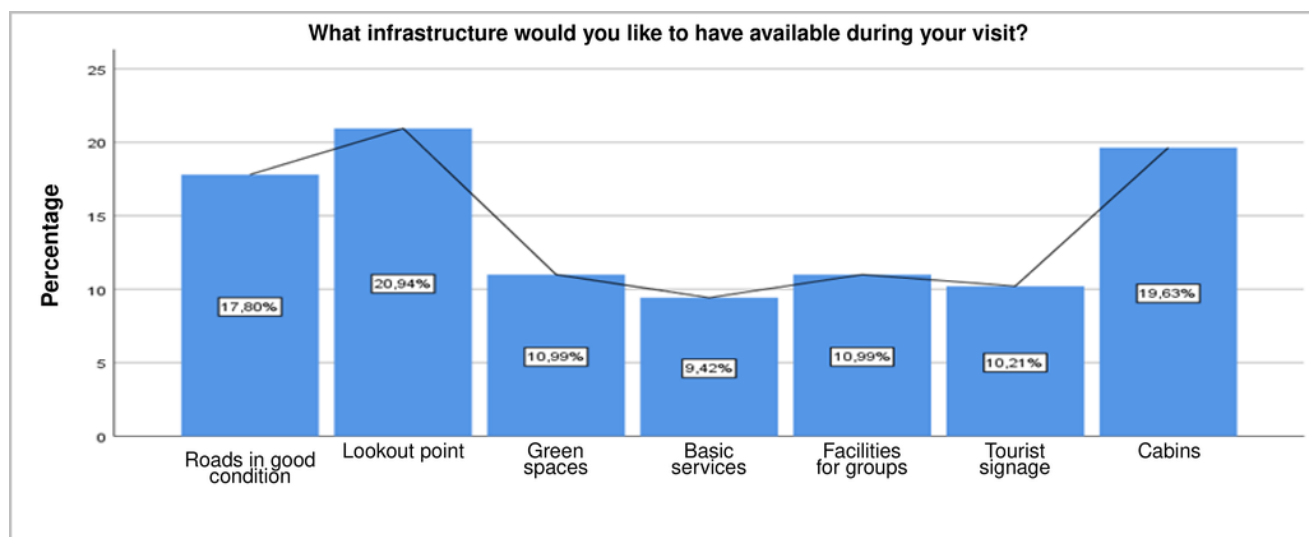


Figure 14. Infrastructure respondents would like to find at Rancho Escondido Farm

Regarding willingness to visit Rancho Escondido Farm if a sustainable agritourism program were implemented, 54.97% of respondents indicated that they would be very willing to participate, 37.17% would be willing, and 7.85% would be less willing (Figure 15).

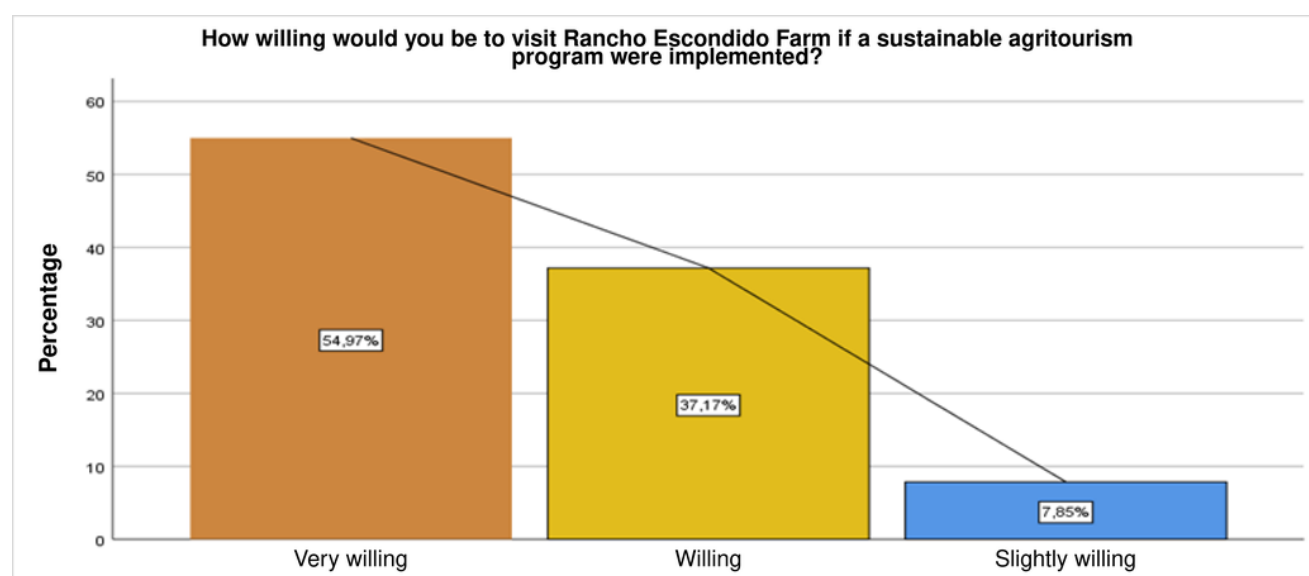


Figure 15. Willingness to visit Rancho Escondido Farm if a sustainable agritourism program were implemented

Figure 16 shows respondents' main expectations for a visit to Rancho Escondido Farm. Participation in educational activities was reported by 30.63%, while 22.77% wished to enjoy an authentic countryside experience, 19.90% sought cultural experiences, 15.71% wanted to relax in a natural setting, and 10.99% wished to learn about sustainable agriculture.

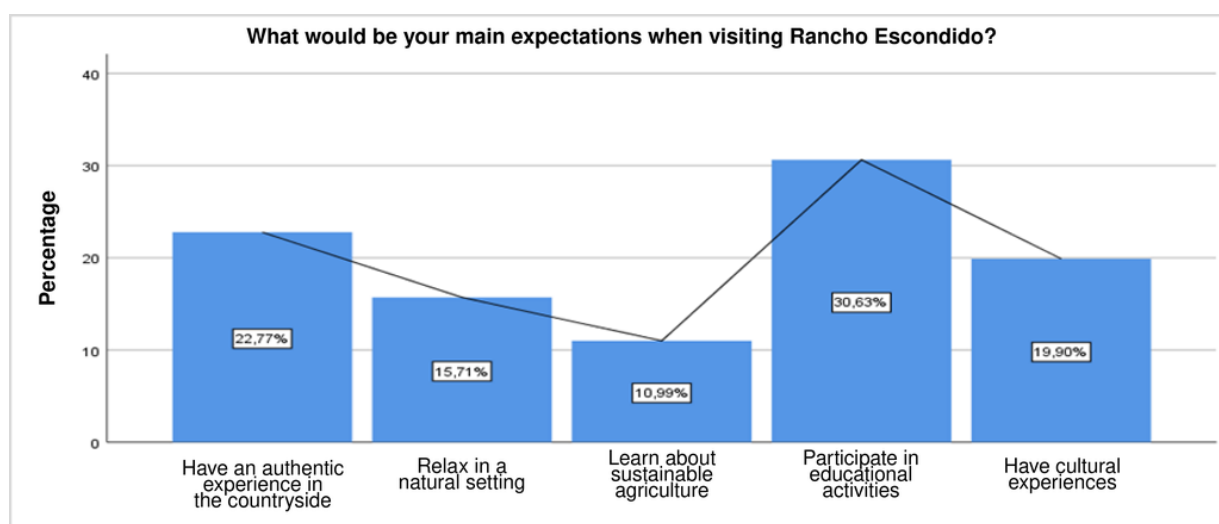


Figure 16. Main expectations for a visit to Rancho Escondido Farm

Finally, when asked about their anticipated satisfaction with the services and activities described in the survey, 67.80% of respondents stated that they would feel very satisfied, whereas 31.41% indicated that they would feel only slightly satisfied with the services offered at Rancho Escondido Farm (Figure 17).

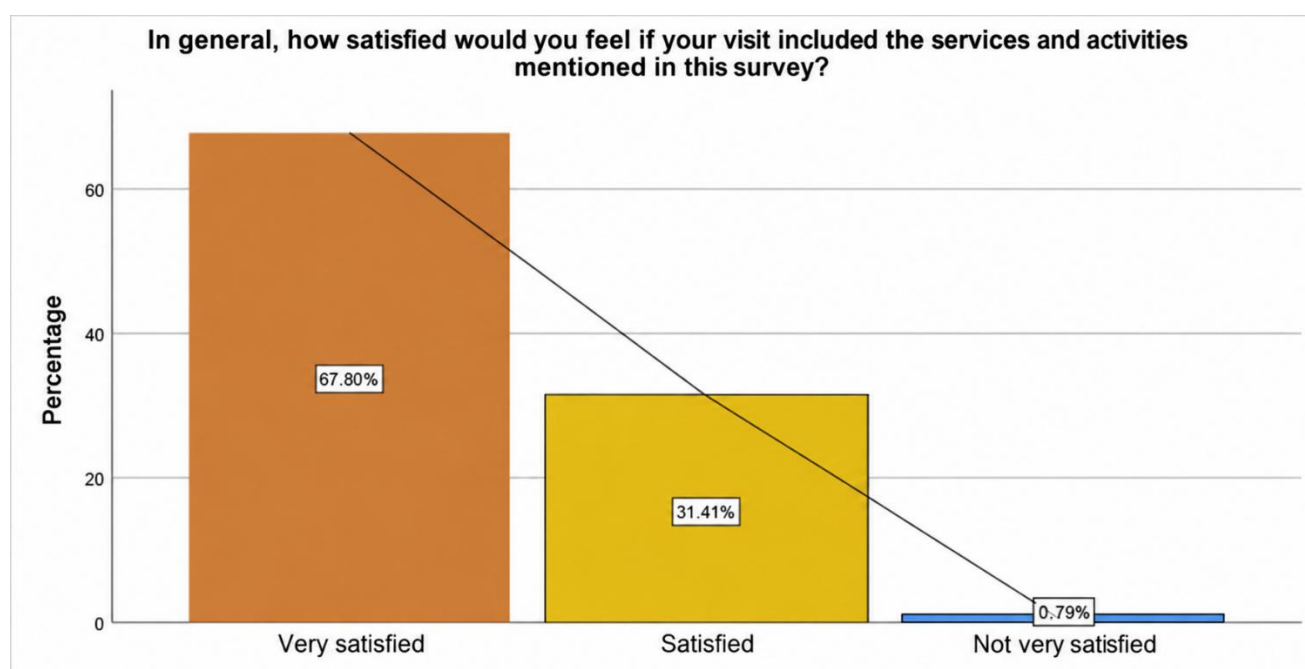


Figure 17. Anticipated satisfaction with visiting the farm and experiencing the aforementioned services and activities

4. DISCUSSION

The largest proportion of respondents (43.98%) were aged 21–30. This is consistent with other studies highlighting the importance of young people in the development of tourism and economic initiatives (Tomalá Tomalá, 2013). According to Varisco (2018), individuals in this age group tend to be more likely to participate in tourism and leisure activities because they have more available time and a greater willingness to explore new experiences.

The gender balance, with 50.79% male and 49.21% female respondents, is important because it allows for a balanced analysis of both groups (Garaicoa Fuentes et al., 2023). In line with other studies on gender in

tourism, Villacís Villacís (2020) indicates that women tend to be more interested in cultural and educational experiences, whereas men prefer adventure activities and those related to agroindustrial knowledge.

Regarding marital status, 50.79% of respondents were single and may have a greater interest in tourism. Astudillo Farías (2018) and Montilla-Pacheco et al. (2023) indicate that single individuals have a broader range of tourism interests because they have more available time and organize group tourism activities.

A total of 52.88% of respondents had a secondary education, reflecting a population with limited access to higher education (Álvarez Calupiña et al., 2022). This influences tourism expectations, as individuals with a secondary education need to seek more accessible experiences focused on recreation, whereas those with higher education may prefer educational or cultural development activities (Terán Encalada, 2021).

Of the respondents, 33.25% indicated that they enjoy traveling two to three times a year, suggesting considerable interest in tourism, probably motivated by the need to take a break from daily routines. According to Riveros Serrato et al. (2018), this travel frequency is associated with people seeking accessible, nearby destinations, making agritourism an appealing option (Parrales Reyes et al., 2024).

Respondents' main travel motivations were vacations, at 32.20%, and leisure, at 26.18%. This finding is consistent with previous studies highlighting vacations as one of the main reasons for tourism, particularly in rural areas with places that remain undiscovered by tourists. Nevertheless, there is a perceived need to develop agritourism in these areas (Oliver Ayala et al., 2024).

Furthermore, 56.81% of respondents indicated that they travel with their families, which is consistent with family tourism trends observed in the country. According to Arias (2023), this type of tourism typically involves seeking recreational activities that people of all ages can enjoy (Rodríguez Ron, 2024).

Finally, regarding expectations for a visit, 30.63% of respondents expressed interest in educational activities that could provide benefits through learning experiences rooted in ancestral knowledge (Cobos Izquierdo et al., 2021; Cajamarca et al., 2023). Meanwhile, 67.80% anticipated a high level of satisfaction with the prospect of receiving services and participating in proposed activities that could promote local agritourism development (Riveros Serrato et al., 2018).

CONCLUSIONS

The results show considerable interest among respondents in boat rides, accommodation, and authentic countryside experiences, along with a strong willingness to participate. These findings highlight expectations related to sustainability education and the development of programs that promote tourism and environmental awareness, supported by local economic development.

The level of anticipated satisfaction indicates that the proposed services will be well received, providing an opportunity to strengthen sustainable tourism. The findings reveal favorable prospects for implementing an agritourism program at Rancho Escondido Farm, with the potential to attract local tourists and promote the community's economic development while encouraging sustainable agricultural practices and environmental preservation.

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CONFLICT OF INTEREST

The authors declare no conflicts of interest related to this work.

AUTHOR CONTRIBUTIONS

Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Visualization, Writing – original draft, Writing – review & editing: Macias-Zambrano, Y. J. and Manjarrez-Fuentes, N. N.

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